



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/398,276	09/20/1999	BENTON F. BAUGH		9860

7590 01/14/2004

BENTON F BAUGH
14626 OAK BEND
HOUSTON, TX 770796441

EXAMINER

MAYO, TARA L

ART UNIT PAPER NUMBER

3671

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/398,276

Applicant(s)

BAUGH, BENTON F.

Examiner

Tara L. Mayo

Art Unit

3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 24-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7-22 and 24-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 3671

DETAILED ACTION

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 3671.

Claim Objections

2. Claim 8 is objected to because of the following informalities: stray text. On line 1, delete "9.". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7, 11 through 14, 18 through 22, 27 through 33, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jee (U.S. Patent No. 4,679,598).

Jee '598 discloses a method of removing hydrates from the inside of a subsea pipeline

(4) the method comprising the steps of:

with regard to claims 7 and 14,

repeatedly circulating water (col. 1, lines 59 through 60) through a circulation chamber

(1) alternately over a portion of the outer surface of said pipeline and over heating means (col.

Art Unit: 3671

2, lines 36 through 38) to cause the hydrates to melt into liquids and/or gases within said subsea pipeline (col. 1, lines 17 through 31);

with regard to claim 13,

placing a remote circulation chamber adjacent to said pipeline, said circulation chamber having an open side to said pipeline;

repeatedly circulating seawater out of said circulation chamber, through heating means, back into said circulation chamber, and across a portion of said pipeline such that heated seawater will be circulated across said portion of said pipeline to warm said pipeline and heat added to the seawater not transferred to said portion of said pipeline will increase the inlet seawater temperature to the heating means;

with regard to claim 20,

converting energy into heat in seawater below sea level and adjacent to said subsea pipeline (col. 1, lines 61 through 64);

with regard to claims 21 and 30,

wherein said blockage is hydrates or paraffin;

with regard to claims 22 and 31,

wherein said hydrates or paraffin are melted into liquids or gases to eliminate the blockage;

with regard to claim 29,

placing a circulation chamber (1) adjacent to said subsea pipeline (4) and circulating a heated fluid on a portion of the surface of said subsea pipeline; and

with regard to claim 33,

Art Unit: 3671

wherein heat is generated near the seafloor to heat said fluid.

Jee '598 discloses all of the steps and associated features of the claimed method with the exception(s) of:

with regard to claims 7, 20, and 32,

the water being seawater;

with regard to claims 11, 18, 27, and 37,

the further step of moving a circulation chamber along the subsea pipeline while circulating the seawater;

with regard to claims 12, 19, 28, and 38,

resilient seals provided between the circulation chamber and the subsea pipeline to separate the heated seawater within the circulation chamber from the seawater outside the circulation chamber;

with regard to claim 13,

performing the step of placing with a remote vehicle; and

with regard to claim 29,

the pipeline being buried; and

the further step of moving the circulation chamber along the buried subsea pipeline while circulating the heated fluid.

With regard to claims 7, 20, and 32, while Jee '598 is silent with regard to the type of water used in the claimed method, it would have been obvious to one of ordinary skill in the

Art Unit: 3671

art of pipe improvement at the time of invention to use seawater because it would be readily available in the ambient.

With regard to claims 11, 18, 27, 29, and 37, it would have been obvious to one having ordinary skill in the art of pipe improvement at the time of invention to modify the method disclosed by Jee '598 such that it would include the step of moving the circulation chamber along the subsea pipeline while circulating the heated fluid. The motivation would have been to remove blockage from along the length of the pipeline. Furthermore, it has been held that making an old device portable or movable without producing any new and unexpected result involves only routine skill in the art. *In re Lindber*, 93 USPQ 23 (CCPA 1952).

With regard to claims 12, 19, 28, and 38, it would have been well within the ordinary level of skill for one in the art of pipe improvement at the time the invention was made to provide resilient seals between the circulation chamber and the pipe shown by Jee '598. The motivation would have been to prevent heat loss due to commingling of the heated seawater with ambient seawater.

With regard to claim 13, it would have been well within the ordinary level of skill for one in the art of pipe improvement at the time the invention was made to use a remote vehicle in the system disclosed by Jee '598 to place the chamber adjacent the subsea pipe. The motivation would have been to provide a means facilitating the placement of the chamber on the seafloor adjacent an existing subsea pipeline.

With regard to claim 29, Applicant's recitation of a buried pipeline is anticipated by the teachings of Jee '598 because the disclosed method is capable of being performed on a buried subsea pipeline.

Art Unit: 3671

5. Claims 8, 15, 24, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jee (U.S. Patent No. 4,679,598) in view of Langner et al. (U.S. Patent No. 6,264,401 B1).

Jee '598 discloses all of the steps of the claimed method with the exceptions of:
with regard to claims 8, 15, 24, and 34,

heating by electric heating means.

Langner et al. '401 expressly teach the use of electricity to generate heat for direct application to the exterior surface of a subsea pipeline (10), thereby enhancing the flow of the pipeline (col. 2, lines 37 through 40; and col. 6, lines 25 through 42).

With regard to claims 8, 15, 24, and 34, while Jee '598 is silent with respect to the heating means, it would have been obvious to one of ordinary skill in the art of pipe improvement at the time of invention to use electric heating means as taught by Langner et al. '401. The motivation would have been achieve direct heating of the pipeline.

6. Claims 9, 16, 25, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jee (U.S. Patent No. 4,679,598) in view of Moser et al. (U.S. Patent No. 4,420,114).

Jee '598 discloses all of the steps of the claimed method with the exceptions of:
with regard to claims 9, 16, 25, and 35,

heating by pressure reducing means.

Moser et al. '114 disclose a liquid heating system comprising pressure reducing means (col. 3, lines 46 through 56).

Art Unit: 3671

With regard to claims 9, 16, 25, and 35, while Jee '598 is silent with respect to the heating means, it would have been obvious to one of ordinary skill in the art of pipe improvement at the time of invention to use pressure reducing heating means as taught by Moser et al. '114 to avoid energy losses.

7. Claims 10, 17, 26, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jee (U.S. Patent No. 4,679,598) in view of Smith et al. (U.S. Patent No. 5,443,056).

Jee '598 discloses all of the steps of the claimed method with the exceptions of:
with regard to claims 10, 17, 26, and 36,

the heating means being chemical.

Smith et al. '056 disclose an exothermic heater device (10) comprising chemical heating means and expressly teach its use for heating the exterior of a pipe, wherein the benefit of the heating device is its operation without any danger of overheating.

With regard to claims 10, 17, 26, and 36, while Jee '598 is silent with respect to the heating means, it would have been obvious to one of ordinary skill in the art of pipe improvement at the time of invention to use chemical heating means as taught by Smith et al. '056 to avoid overheating.

Allowable Subject Matter

8. Claims 1 through 6 are allowed.

Art Unit: 3671

9. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Response to Arguments

10. Applicant's arguments filed 02 October 2003 have been fully considered but they are not persuasive.

With regard to the claimed limitation of a specific type of heating means (i.e., electric, pressure reducing, or chemical), Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

With regard to Applicant's statements that the method disclosed by Jee '598 requires placement of the chamber prior to laying of the pipeline, the Examiner is unable to confirm the teaching of the same in the patented reference.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ripley et al. (U.S. Patent No. 5,470,458 A), Oudoire et al. (U.S. Patent No. 5,939,667 A), and Sumner (U.S. Patent No. 6,049,657 A) all address the problem of removing blockages from subsea pipelines.

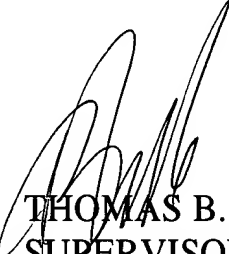
Art Unit: 3671

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tara L. Mayo whose telephone number is 703-305-3019. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 703-308-3870. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

TLM
06 January 2004



THOMAS B. WILL
SUPERVISORY PATENT EXAMINER
GROUP 3600